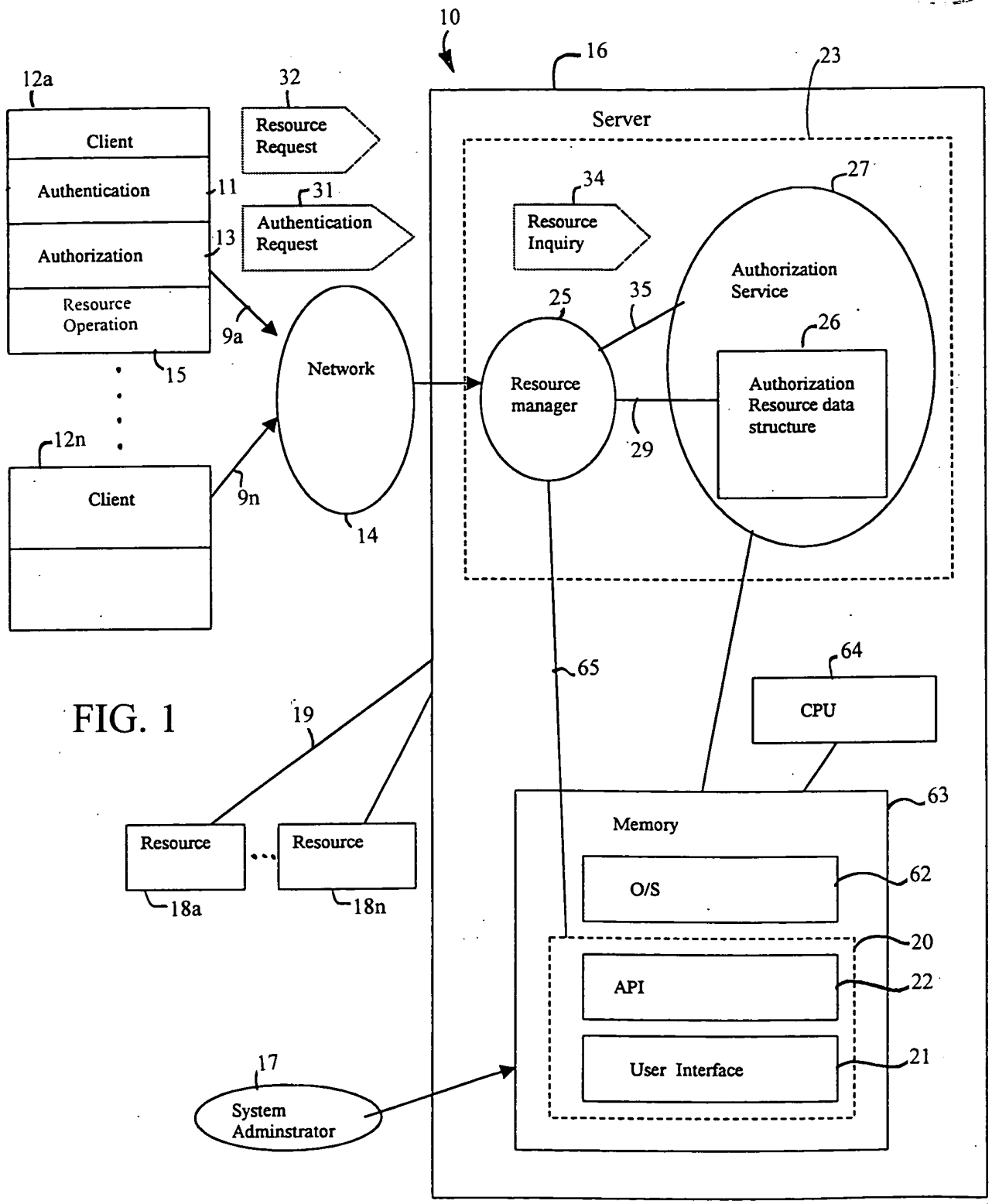
10
16
23
12a
32
Client
Resource Request
Server
Authentication
11
31
Authentication Request
34
27
Resource Inquiry
Authorization
13
Authorization Service
Resource Operation
25
35
9a
26
Network
Resource manager
Authorization Resource data structure
15
29
12n
Client
9n
14
65
64
CPU
19
63
Memory
Resource
Resource
O/S
62
18a
18n
20
API
22
User Interface
21
17
System Adminstrator

FIG. 1

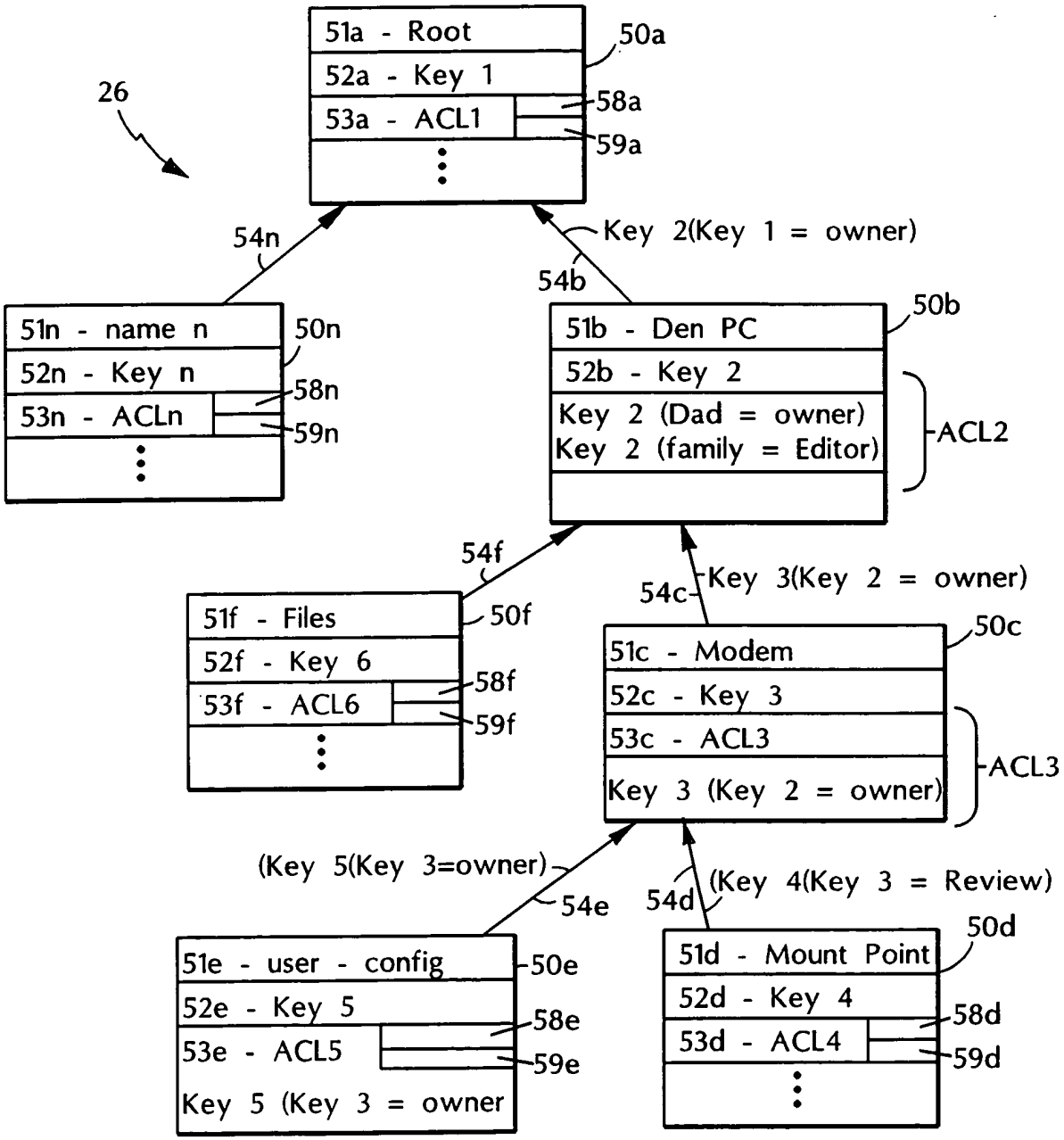
26
51a - Root
50a
52a - Key 1
53a - ACL1
58a
59a
54n
Key 2(Key 1 = owner)
54b
51n - name n
50n
52n - Key n
53n - ACLn
58n
59n
51b - Den PC
50b
52b - Key 2
Key 2 (Dad = owner)
Key 2 (family = Editor)
ACL2
54f
54c
Key 3(Key 2 = owner)
51f - Files
50f
52f - Key 6
53f - ACL6
58f
59f
51c - Modem
50c
52c - Key 3
53c - ACL3
Key 3 (Key 2 = owner)
ACL3
(Key 5(Key 3=owner)
54e
54d
(Key 4(Key 3 = Review)
51e - user - config
50e
52e - Key 5
53e - ACL5
58e
59e
Key 5 (Key 3 = owner
51d - Mount Point
50d
52d - Key 4
53d - ACL4
58d
59d

FIG. 2

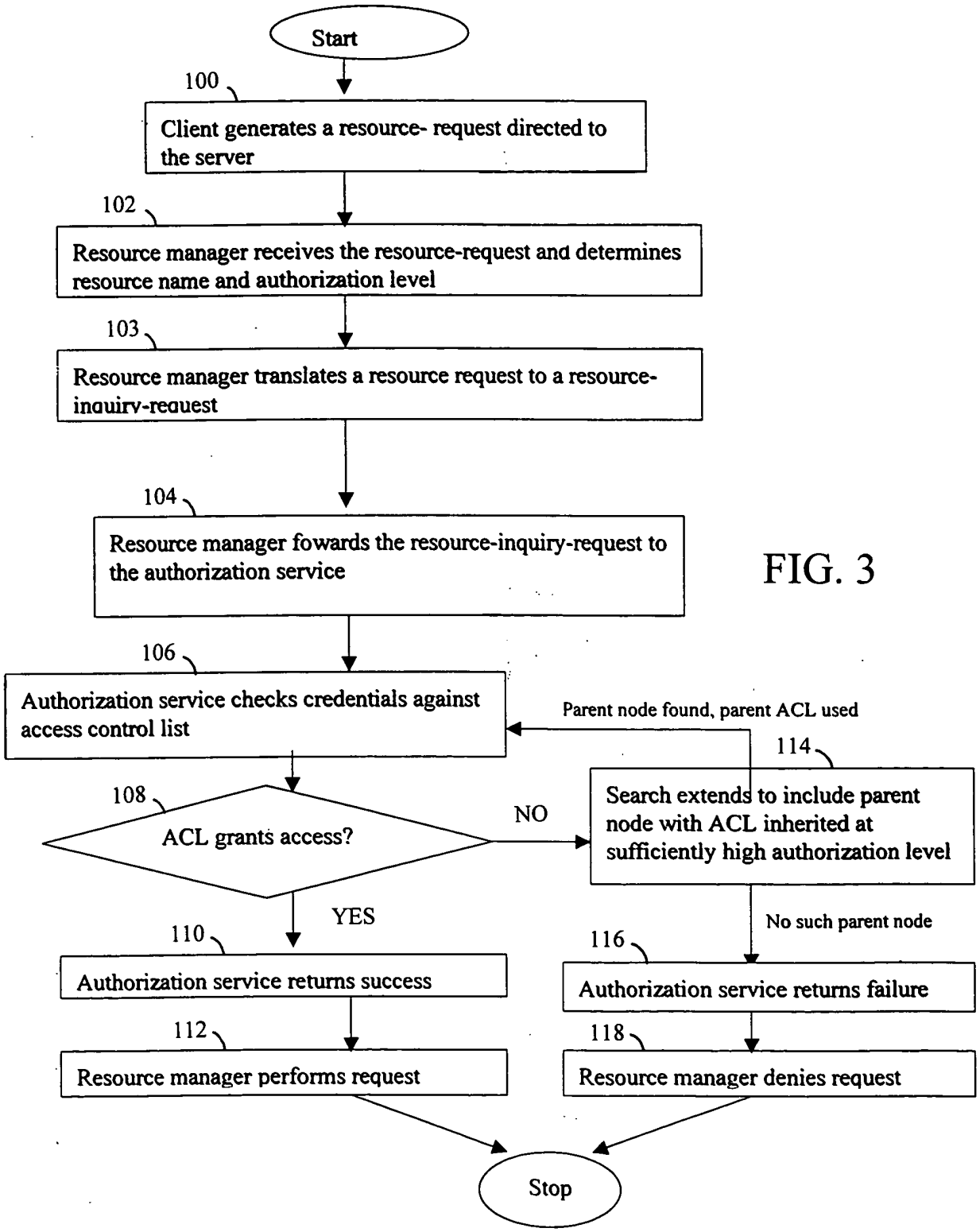
Start
100
Client generates a resource- request directed to the server
102
Resource manager receives the resource-request and determines resource name and authorization level
103
Resource manager translates a resource request to a resource-inquiry-request
104
Resource manager fowards the resource-inquiry-request to the authorization service
106
Authorization service checks credentials against access control list
Parent node found, parent ACL used
114
Search extends to include parent node with ACL inherited at sufficiently high authorization level
108
ACL grants access?
NO
YES
No such parent node
110
Authorization service returns success
116
Authorization service returns failure
112
Resource manager performs request
118
Resource manager denies request
Stop

FIG. 3

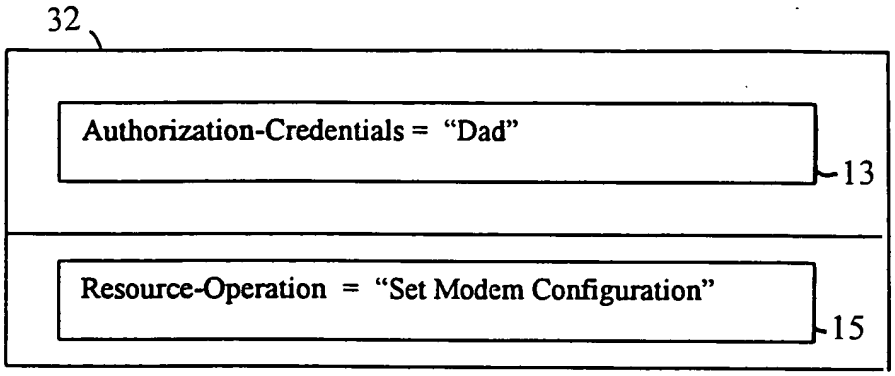
32
Authorization-Credentials = "Dad"
13
Resource-Operation = "Set Modem Configuration"
15

FIG. 4

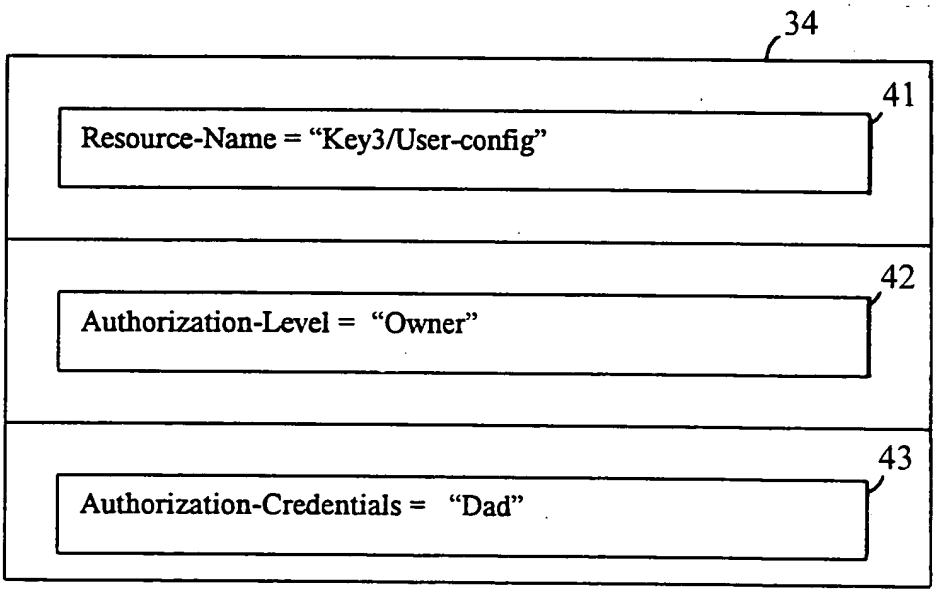
34
41
Resource-Name = "Key3/User-config"
42
Authorization-Level = "Owner"
43
Authorization-Credentials = "Dad"

FIG. 5